

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)

Revision of the Commission's Rules)
to Ensure Compatibility with)
Enhanced 911 Emergency Calling Systems)

CC Docket No. 94-102

To: The Commission

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COMMENTS OF E.F. JOHNSON COMPANY

The E.F. Johnson Company ("E.F. Johnson" or the "Company"), by its attorneys, pursuant to the provisions of Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission") hereby submits its comments in response to the Further Notice of Proposed Rule Making ("Further Notice") adopted in the above referenced proceeding¹ which seeks to ensure that improvements made possible by technological advances are incorporated into Emergency 911 ("E911") systems accessed by mobile communications customers.

I. INTRODUCTION

E.F. Johnson is a leading designer and manufacturer of radio communications and specialty communications products for commercial and public safety use. Founded over seventy (70) years ago as an electronic components manufacturer, E.F. Johnson

¹ Report and Order and Further Notice of Proposed Rule Making, CC Docket No. 94-102, FCC 96-264 (released July 26, 1996). The FCC extended the period for the submission of comments and reply comments in this proceeding, by its Order, CC Docket No. 94-102, DA 96-1405 (released August 21, 1996).

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entered the radio communications equipment market in the late 1940's and is one of the three largest providers of land mobile radio systems in the United States. It produces base stations and vehicular mounted and portable transceivers that operate in various portions of the radio spectrum and which are used by a variety of entities requiring communications capabilities. The Company manufactures products for, among others, 800 MHz and 900 MHz specialized mobile radio ("SMR") service licensees who have been defined as "covered carriers" in this proceeding.²

In the Report and Order in this proceeding, the Commission adopted regulations designed to enable customers of covered carriers to access, without impediments, E911 systems. The regulations are also designed to permit Public Safety Answering Points ("PSAPs") to receive: 1) a caller's automatic number identification ("ANI") and the location of the nearest cell site or base station; and 2), ultimately, a caller's automatic location information ("ALI"). The Further Notice examines: 1) whether requirements can be developed under which carriers will deliver more precise location information to PSAPs; 2) the ability of mobile communications customers to access E911 systems when they are out of the service area of their provider; and 3) consumer education concerning the ability of mobile communications customers to access E911 systems.

The Company has been, and will continue to be, a supporter of efforts to provide mobile communications customers with access to the most sophisticated 911 technology. Nevertheless, there are technical limitations on mobile communications equipment (particularly equipment used in SMR systems) that will make it unfeasible to

² *Id.*

provide the type of E911 information the FCC envisions. The Commission's suggestions will have an impact, therefore, on the Company as a manufacturer of mobile communications equipment, and on its customers as providers of covered services. Accordingly, E.F. Johnson is pleased to have the opportunity to submit the following comments.

II. COMMENTS

A. Location Information Technology

The Commission proposes that covered carriers be required to achieve the capabilities to provide PSAPs, after the initial five year E911 implementation period, information that locates a wireless 911 caller within a radius of 40 feet, using longitude, latitude and vertical location data, and that provides this degree of accuracy for ninety percent (90%) of the calls processed. The Commission further proposes that this requirement would apply only if: 1) a covered carrier receives a request for E911 services from the administrator of a PSAP that is capable of receiving and utilizing the data elements associated with the services; and 2) a mechanism for the recovery of costs relating the provision of such services is in place.

E. F. Johnson disagrees with these proposals. The Commission's present requirements are already unnecessarily burdensome for some covered carriers. In particular, the current requirements envision the utilization of a "grid" pattern of transmitters employed by the carrier. In the SMR services (and perhaps in rural cellular and PCS systems) it may be unnecessary to employ such a pattern of base station

transmitters to provide adequate service to customers.³ E.F. Johnson questions whether it is in the public interest to require a carrier to construct a pattern of “overlay” base station sites to provide E911 service, when such antennas would not be required for coverage purposes. Nevertheless, assuming the wisdom of this requirement, even this “overlay” measure would not provide PSAPs with the type of information envisioned by the Further Notice. In E.F. Johnson’s evaluation, the type of accuracy the Commission suggests cannot be provided through base station infrastructure. Instead, mobile units would be required to be equipped with Global Positioning System (“GPS”) or similar capabilities. Revision of mobile and portable equipment to incorporate GPS technology would make the equipment bulkier and more costly.

In addition to imposing significant implementation difficulties, designing systems that will provide the type of location information expected by the Commission would degrade the capabilities of covered carriers. Some capacity of a carrier’s system will require dedication to transmit location information data. That capacity will, accordingly, be unavailable to meet the demands of a carrier’s customer. The effect may be particularly noticeable in smaller SMR systems, in which carriers may have limited spectrum capacity.

Because E.F. Johnson believes that the Commission’s recommendation can only be accomplished by changing the capabilities of subscriber units (as well as the capabilities of the base station unit), the Commission should excuse carriers from these

³ E.F. Johnson recognizes that others have submitted petitions for reconsideration of the Report and Order, stating that the E911 requirements should not be imposed on all SMR licensees. E.F. Johnson supports those petitions.

potential new E911 requirements with respect to existing customers. It would be unfeasible to require a covered carrier to contact all of its subscribers to provide them with new equipment.⁴

The Company notes that the requirements described by the Commission would only be imposed if there is a mechanism for cost recovery in place. Such a cost recovery mechanism would be designed to defray expenses incurred by carriers. However, the Commission fails to consider the expenses that would be incurred by manufacturers in the production of equipment that will meet the more stringent standards. Moreover, because manufacturers will ultimately be required to pass the increased costs of producing more advanced E911 systems to customers, the cost recovery mechanism will be inadequate to recover the most significant expenses for implementing the capabilities suggested by the Commission. Accordingly, E.F. Johnson urges the Commission to carefully evaluate the increased usefulness of E911 systems that would be achieved by its proposal, as opposed to the increased cost of subscriber equipment that such an improvement in capability will require.

B. Access to 911 Service via Multiple Mobile Systems

The Commission seeks further comment on ways to enable mobile users to complete a 911 call without regard to the availability (in the geographic area in which they seek to place a call) of the system or technology utilized by their wireless service. The Commission particularly seeks comment regarding whether it would be desirable

⁴ E.F. Johnson presumes that any required change to customer equipment would be part of the cost recovery mechanism provided by the PSAP.

to establish arrangements and procedures under which all wireless 911 calls could be handled by the available service.

As the Commission recognizes, common air interface standards make it possible for cellular customers to access carriers other than their own. However, there are no common air interface standards in, for example, the SMR service. The Commission states that it:

has chosen not to establish a common technical air interface for broadband PCS...[or] for digital cellular service. We have decided that the marketplace should determine which digital protocols will survive, and we do not intend to reach different conclusions in this proceeding.⁵

However, without a common air interface, the goal of allowing mobile customers access to a variety of systems, even for 911 purposes, is unrealistic. Any common protocol for 911 purposes would require consensus among manufacturers. Such a common protocol would be required to be compatible with whatever other signaling protocol was employed by the service. Similarly, a requirement that handsets operate on two systems is unrealistic for purposes of satisfying the Commission's goals. It will not be clear, from geographic area to geographic area, which mobile systems are in operation. It is possible that a mobile user will operate equipment with 900 MHz SMR and TDMA PCS capabilities, and seek 911 service in an area that only offers analog cellular service.

C. 911 Availability and Consumer Education

The Commission seeks comments on whether, within a reasonable time after the one year compliance period adopted in the Report and Order, covered carriers should

⁵ Further Notice at para. 147.

be obligated to transmit non-code identification 911 calls even without a request from the PSAP. E.F. Johnson disagrees with such a requirement. As noted above, particularly with respect to SMR systems that might otherwise not construct multiple site systems, covered carriers may be required to construct and operate additional facilities to meet the E911 requirements. It would be wasteful for the Commission to require those carriers to undertake unnecessary expenses in the event that PSAPs are unable to utilize transmitted information. Accordingly, covered carriers' obligations to transmit non-code identification 911 calls should be triggered by PSAP request only.

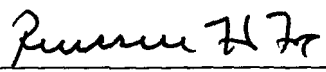
The Commission also seeks comments concerning the type of consumer education necessary to inform mobile users of the capability of their systems. E.F. Johnson agrees that consumer education will be an important element of the Commission's E911 program. It believes that each service provider should be responsible for educating its customers. The mobile service provider initiates and maintains the relationship with the mobile customer through billing and other communications. Moreover, system capabilities will change over time. Accordingly, any requirement imposed on equipment manufacturers may be of limited value, if there is an upgrade in the E911 capabilities in a customer's service area. While E.F. Johnson will be pleased to assist service providers in preparing material for mobile customers, it should be the service provider's primary responsibility to ensure that mobile subscribers are adequately informed as to the capabilities of their system.

III. CONCLUSIONS

E.F. Johnson supports the Commission's efforts to provide even more advanced E911 services to consumers. The Commission must recognize, however, the technological limitations of providing more information regarding a mobile customer's location. The Commission must also recognize that mobile customers will not be able to make E911 calls outside their coverage area on systems that are not compatible, without the establishment of a common air interface, at least with respect to the emergency call. Because the Commission has stated its aversion to establishing a common air interface, such compatibility may not be possible. Finally, E.F. Johnson supports further consumer education concerning E911 capabilities. However, the responsibility for such education should lie primarily with the service provider who has the most direct and frequent contact with the user, not with the equipment manufacturer.

WHEREFORE, THE PREMISES CONSIDERED, E.F. Johnson Company
submits the foregoing comments and urges the Commission to proceed in a manner
consistent with the views expressed herein.

Respectfully submitted,

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